

Dominion Nuclear Connecticut, Inc.  
Millstone Power Station  
Rope Ferry Road, Waterford, CT 06385



**AUG 22 2008**

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

Serial No.	08-0503
MPS Lic/GJC	R0
Docket No.	50-336
License No.	DPR-65

**DOMINION NUCLEAR CONNECTICUT, INC.**  
**MILLSTONE POWER STATION UNIT 2**  
**LICENSEE EVENT REPORT 2008-005-00,**  
**FEEDWATER HEATER LEVEL OSCILLATION**  
**AND MANUAL REACTOR TRIP**

This letter forwards Licensee Event Report (LER) 2008-005-00 which documents a condition identified at Millstone Power Station Unit 2 on June 28, 2008. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B).

If you have any questions or require additional information, please contact Mr. William D. Bartron at (860) 444-4301.

Sincerely,

J. Alan Price  
Site Vice President - Millstone

IE22  
NRR

Attachments: 1

Commitments made in this letter: None.

cc: U.S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19406-1415

Ms. C. J. Sanders  
Project Manager  
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NRC Senior Resident Inspector  
Millstone Power Station

**Attachment 1**

**LICENSEE EVENT REPORT 2008-005-00,**  
**FEEDWATER HEATER LEVEL OSCILLATION**  
**AND MANUAL REACTOR TRIP**

**Millstone Power Station Unit 2**  
**Dominion Nuclear Connecticut, Inc. (DNC)**

## LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to [infocollects@nrc.gov](mailto:infocollects@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

## 1. FACILITY NAME

Millstone Power Station - Unit 2

## 2. DOCKET NUMBER

05000336

## 3. PAGE

1 OF 2

## 4. TITLE

Feedwater Heater Level Oscillation and Manual Reactor Trip

## 5. EVENT DATE

MO

DAY

YEAR

06

28

08

## 6. LER NUMBER

YEAR

SEQUENTIAL  
NUMBERREV  
NO.

2008-005-00

## 7. REPORT DATE

MO

DAY

YEAR

08

22

2008

## 8. OTHER FACILITIES INVOLVED

FACILITY NAME

DOCKET NUMBER

FACILITY NAME

DOCKET NUMBER

## 9. OPERATING MODE

1

## 11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

## 10. POWER LEVEL

100%

20.2201(b)

20.2203(a)(3)(ii)

50.73(a)(2)(ii)(B)

50.73(a)(2)(ix)(A)

20.2201(d)

20.2203(a)(4)

50.73(a)(2)(iii)

50.73(a)(2)(x)

20.2203(a)(1)

50.36(c)(1)(i)(A)

X

50.73(a)(2)(iv)(A)

73.71(a)(4)

20.2203(a)(2)(i)

50.36(c)(1)(ii)(A)

50.73(a)(2)(v)(A)

73.71(a)(5)

20.2203(a)(2)(ii)

50.36(c)(2)

50.73(a)(2)(v)(B)

OTHER

20.2203(a)(2)(iii)

50.46(a)(3)(ii)

50.73(a)(2)(v)(C)

Specify in Abstract below or  
in NRC Form 366A

20.2203(a)(2)(iv)

50.73(a)(2)(i)(A)

50.73(a)(2)(v)(D)

20.2203(a)(2)(v)

50.73(a)(2)(i)(B)

50.73(a)(2)(vii)

20.2203(a)(2)(vi)

50.73(a)(2)(i)(C)

50.73(a)(2)(viii)(A)

20.2203(a)(3)(i)

50.73(a)(2)(ii)(A)

50.73(a)(2)(viii)(B)

## 12. LICENSEE CONTACT FOR THIS LER

## NAME

William D. Bartron, Supervisor Nuclear Station Licensing

## TELEPHONE NUMBER (Include Area Code)

860-444-4301

## 13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU- FACTURER	REPORTABLE TO EPIX

## 14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete EXPECTED SUBMISSION DATE).☒ NO

## 15. EXPECTED

SUBMISSION  
DATE

MONTH

DAY

YEAR

## 16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On June 28, 2008, at 1146 with the Millstone Power Station Unit 2 in Mode 1 at 100% power, operators manually tripped the reactor when both main feedwater pumps tripped. Main turbine combined intercept valve (CIV) testing was in progress. The testing of the #3 CIV had just been completed when the 2A feedwater heater level began oscillating. The perturbations in the feedwater heater levels caused a feedwater pump suction pressure to decrease to the pump trip setpoint tripping both pumps. The operators manually tripped the reactor prior to reaching the steam generator low level automatic trip setpoint.

During the event, the in-house electrical buses were automatically transferred from the Normal Station Service Transformer to the Reserve Station Service Transformer causing a momentary loss of the non-safety grade 120 volt power supplies (VR-11 and VR-21). This affected multiple components which required additional operator actions. The systems functioned as expected based upon the signals received. The operators took actions as trained and in accordance with procedures. No equipment was damaged as a result of this event. The unit was brought to a stable condition in hot-standby (Mode 3) and the feedwater heater level control valve was repaired.

Ineffective configuration control of parts allowed parts to be installed in a feedwater level control valve causing it to operate incorrectly which caused divergent feedwater heater level oscillations and the main feedwater pumps to trip. This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B).

# LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET (2)	LER NUMBER (6)			PAGE (3)	
Millstone Nuclear Power Station - Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2	OF 2
		2008	- 005	- 00		

NARRATIVE (If more space is required, use additional copies of NRC Form 366A) (17)

## 1. Event Description:

On June 28, 2008, at 1146 with the Millstone Power Station Unit 2 (MPS2) in Mode 1 at 100% power, operators manually tripped the reactor [RCT] when both main feedwater pumps [SJ, P] tripped. The testing of the main turbine [TRB] combined intercept valve (CIV) [FCV] was in progress. The testing of the #1 CIV had been completed satisfactorily and testing of the #3 CIV had just been completed when the 2A feedwater heater [HX] level began oscillating. The oscillations became divergent, requiring the operators to take manual control of the 2A feedwater heater level. Subsequently, high level alarms on the 3A and 3B feedwater heaters were received. This caused the extraction steam valves [FCV] for the 3A and 3B feedwater heaters to automatically shut, which in turn caused a reduction in heater drain flow to the suction of the main feedwater pumps. The feedwater pump suction pressure decreased to the pump trip setpoint causing both pumps to trip. The operators manually tripped the reactor prior to reaching the steam generator [SG] low level automatic trip setpoint, and manually initiated auxiliary feedwater to feed the steam generators in accordance with plant procedures.

Following the trip, during the automatic transfer of the in-house electrical buses from the Normal Station Service Transformer (NSST) [XFMR] to the Reserve Station Service Transformer (RSST) [EA, XFMR], there was a momentary loss of the non-safety grade, 120 volt, power supplies (VR-11 and VR-21) [JX] to the annunciators and control boards when they transferred to their alternate power supplies. The steam generator #2 atmospheric dump valve [RV] and the steam generator #1 safety valve [RV] opened. Additionally, the 'A' steam dump valve to the condenser modulated open, however the 'B', 'C' and 'D' dump valves did not quick open due to a momentary loss of power from VR-11. All the steam dump valves were opened and steaming was re-established to the condenser. The unit was maintained in a stable condition, i.e., hot-standby (Mode 3).

This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv)(A) as an event that resulted in manual or automatic actuation of systems listed in 10 CFR 50.73(a)(2)(iv)(B).

## 2. Cause:

Ineffective configuration control of parts allowed parts to be installed in a feedwater level control valve [LCV] causing it to operate incorrectly. This resulted in divergent feedwater heater level oscillations. The heater oscillations resulted in both main feedwater pumps to trip, requiring the operators to manually shutdown the reactor.

## 3. Assessment of Safety Consequences:

The event had very low safety consequences. The reactor was manually shutdown following the trip of the main feedwater pumps caused by level oscillations in the 2A feedwater heater. The unit responded as required for these conditions. The operators took actions as trained and in accordance with procedures. No equipment was damaged or radiation released as a result of this event.

## 4. Corrective Action:

Short term corrective action was to repair the feedwater heater level control valve. A modification has been implemented to the quick open signal circuitry to the condenser steam dump and the steam generator atmospheric dump valves such that these circuits are now powered from uninterruptible power supplies. An investigation into this event was conducted and other appropriate corrective actions to strengthen the parts control process are being addressed in accordance with the Millstone Corrective Action Program.

## 5. Previous Occurrences:

No previous similar events/conditions were identified.

Energy Industry Identification System (EIS) codes are identified in the text as [XX].